

ABSTRACT OF INVENTION

The closure system of the present invention includes a pressure pad of conventional design which is urged against the external surfaces of a plurality of loosely associated overlying prefolded end side wall portions of the bottom end of a carton blank which is disposed on a mandrel which includes a backup pad disposed within the carton and contiguous to the internal surfaces of the prefolded end side wall portions to thereby capture the prefolded end side wall portions between the pressure pad and the backup pad. The force for urging the pressure pad initially against the loosely associated overlying prefolded end side wall portions and thereafter providing a sealing pressure against the infolded end side wall portions and maintain this sealing pressure for a time sufficient to permit solidification of the softened heat-sealable component of the carton blank, is generated by means of a piston/cylinder operating through a pivoted arm whose distal end carries a cam follower that is moved against a linearly reciprocative cam which is operatively associated with the pressure pad. The contour of the cam is chosen to provide for maximum distance of movement of the cam, at a relatively low pressure applied by the piston/cylinder, to initially urge the loosely infolded portions of the carton bottom into their desired permanent positions relative to one another, followed by minimum distance of movement of the cam at a relatively high pressure to urge the contiguous ones of the overlying infolded end side wall portions intimately against one another, and hold the same under high pressure as the heat-sealing layer or coating thereon solidifies and bonds the overlying end side wall portions together to define a closed bottom for the carton.